

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. ASMMC.036AUS	APPLICATION NO. 09/975,466
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (USE SEVERAL SHEETS IF NECESSARY)		APPLICANT SOPHIE et al.	
		FILING DATE October 9, 2001	GROUP 2812

JAN 29 2002

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
EK	1 4,058,430	11/15/97	Suntola et al.	156	611	11/25/75
↑	2 5,711,811	01/27/98	Suntola et al.	118	711	11/28/95
↓	3 5,731,634	03/24/98	Matsuo et al.	257	752	06/06/96
↓	4 5,939,334	08/17/99	Nguyen et al.	438	689	05/22/97
↓	5 6,033,584	03/07/00	Ngo et al.	216	67	12/22/97
↓	6 6,066,892	05/23/00	Ding et al.	257	751	05/14/98
↓	7 6,124,189	09/26/00	Watanabe et al.	438	586	03/14/97
EK	8 6,130,123	10/10/00	Liang et al.	438	217	06/30/98

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
EK	9 ✓ 0 469 470 A1	05.02.92	EP	1	1		
EK	10 ✓ EP 0 880 168 A2	25.11.98	EP	1	1		
EK	11 ✓ WO 93/10652	27.05.93	PCT	1	1		
EK	12 WO 00/03420	20.01.00	PCT	1	1		
EK	13 GB 2 340 508 A	23.02.00	UK	1	1		
	14 DE 41 08 73	03.26.25	Germany	1	1		

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
	<del>16 SOI Technology: IBM's Next Advance In Chip Design, Date unknown</del>
EK	16 Baglia, J., Associate Editor, "New Designs and Materials Tackle 1 Gb Memory Challenge," <u>Semiconductor International</u> , World Wide Web address: semiconductor.net, November 2000.
EK	17 Basceri, C., Ph.D. thesis, "Electrical and Dielectric Properties of (Ba,Sr) TiO <sub>3</sub> Thin Film Capacitors for Ultra-High Density Dynamic Random Access Memories," pp. 13-31, Raleigh, N.C. State University (1997).
EK	18 Bursky, D., "Hit Up IEDM For Gigabit And Denser DRAMs And Merged Logic/Memory," <u>Electronic Design</u> , World Wide Web address: planetee.com, (December 1, 1998).
SK	19 Campbell, S.A. et al., "Titanium dioxide (TiO <sub>2</sub> )-based gate insulators," <u>IBM J. Res. Develop.</u> , Vol. 43, No. 3, pp. 383-392 (May 1999).
	20 Fukuzumi, Y. et al., "Liner-Supported Cylinder (LSC) Technology to realize Ru/Ta <sub>2</sub> O <sub>5</sub> /Ru Capacitor for Future DRAMs," <u>IEEE, IED 2000, Session 34 (2000)</u> .
	21 Flores, P. et al., "MOCVD of Thin Ruthenium Oxide Films: Properties and Growth Kinetics," <u>Chem. Vap. Deposition</u> , Vol. 6, No. 4, pp. 493-498 (2000).

EXAMINER <i>Eis/Kali</i>	DATE CONSIDERED <i>10/10/02</i>
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

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	<del>22. Jung, M. et al., "Low thermal-budget fabrication of sputtered PZT capacitor on multilevel interconnects for embedded FeRAM," IEEE, IED 2000, Session 34 (2000).</del>
ER	28. Integrated Circuit Engineering Corporation, Practical Integrated Circuit Fabrication Seminar (1998).
	<del>24. Jung, D. et al., "A Novel <math>\text{Ti}/\text{IrO}_2/\text{Pt}/\text{PZT}/\text{P}/\text{IrO}_2/\text{Ir}</math> Capacitor for A Highly Reliable Mega-Scale FRAM," IEEE, IED 2000, Session 34, (2000).</del>
ER	25. Kawamoto, Y. et al., "The Outlook for Semiconductor Processes and Manufacturing Technologies in the 0.1- $\mu\text{m}$ Age," <i>Hitachi Review</i> , Vol. 48, No. 6, pp. 334-339 (1999).
ER	26. NEC Device Technology International, No. 48, pp. 4-8, (1998).
ER	27. Onda N. et al., "Hydrogen Plasma Cleaning a Novel Process for IC-Packaging," p. 311, Worldwide Web Address: Semiconductor Fabtech.com (1998).
	<del>28. Solanki R. et al., "Atomic Layer Deposition of Copper Seed Layers," <i>Electrochemical and Solid State Letters</i>, Vol. 3, No. 10, pp. 479-480 (2000).</del>
	<del>29. Sundani et al., "Oral presentation of dual damascene process, slides."</del>
ER	30. Uhtaiainen, M. et al., "Studies of NiO thin film formation by atomic layer epitaxy," <i>Materials Science &amp; Engineering</i> , Vol. B54, pp. 98-103 (1998).
	<del>31. Uhtaiainen, M. et al., "Studies of metallic thin film growth in an atomic layer epitaxy reactor using <math>\text{M}(\text{acac})_3</math> (<math>\text{M} = \text{Ni}, \text{Cu}, \text{Pt}</math>) precursors," <i>Applied Surface Science</i>, Vol. 157, pp. 151-158 (2000).</del>
ER	32. Winbond News Release, World Wide Web address: winbond.com, (December 13, 2000).
	<del>33. Won, Seok Jun et al., "Conformal CVD-Ruthenium Process for MIM Capacitor in Giga-bit DRAMs," IEEE, IED 2000, Session 34 (2000).</del>
	34. Xu, P. et al., "A Breakthrough in Low-k Barrier/Etch Stop Films for Copper Damascene Applications," <i>Semiconductor Fabtech</i> , 11 <sup>th</sup> Edition, p. 239 (2000).
ER	35. Yoon, Dong-Soo et al., "Tantalum-ruthenium dioxide as a diffusion barrier between Pt bottom electrode and $\text{TiSi}_2$ ohmic contact layer for high density capacitors," <i>Journal of Applied Physics</i> , Vol. 86, No. 5, pp. 2544-2549 (1999).
	<del>36. Yoon, Dong-Soo et al., "Investigation of <math>\text{RuO}_2</math>-Incorporated Pt Layer as a Bottom Electrode and Diffusion Barrier for High Epsilon Capacitor Applications," <i>Electrochemical and Solid-State Letters</i>, Vol. 3, No. 8, pp. 373-376 (2000).</del>
ER	37. Yoon, Y.-G. et al., 197 <sup>th</sup> Meeting Program Information II, The Electrochemical Society, 197 <sup>th</sup> Meeting - Toronto, Ontario, Canada, May 14-18, 2000, Program Information, I1 - Rapid Thermal and Other Short-Time Processing Technologies I, Electronics Division/Dielectric Science and Technology Division/High Temperature Materials Division, 2000, Wednesday, May 17, 2000, New Applications of RTP, Co-Chairs: A. Fiori and D.-H. Kwon, Time 11:10 Abs#550, Title: Development of RTA Process for the Crystallization of a-Si Thin Film - Y.-G. Yoon, T.-K. Kim, K.-B. Kim, Y. Cho, B.-I. Lee, and S.-K. Joo (Seoul National Univ.)

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EXAMINER <i>Eric Kubit</i>	DATE CONSIDERED <i>10/10/02</i>
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EK ↑ ↓ EK	1.	US 2001/0018266 A1	08/30/01	Jiang et al.	438	678	05/09/01
	2.	6,303,500 B1	10/16/01	Jiang et al.	438	678	02/24/99
	3.	US 6,323,131 B1	11/27/01	Obeng et al.	438	687	06/13/98
	4.	US 2001/0052318 A1	12/20/01	Jiang et al.	118	403	08/01/01
	5.	US 6,346,151 B1	02/12/02	Jiang et al.	118	403	12/16/99

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							YES	NO

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EXAMINER <i>Erik Kuhn</i>	DATE CONSIDERED <i>10/10/02</i>
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